ICHCA
INTERNATIONAL

OVERVIEW OF THE PROVISIONS IN THE INTERNATIONAL MARITIME DANGEROUS GOODS CODE

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Warning

This document necessarily represents a summary of some of the important aspects of the IMDG Code. For detailed advice it is essential to refer to the latest version of the Code itself and read this in conjunction with the relevant national legislation.

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OVERVIEW OF THE PROVISIONS IN THE INTERNATIONAL MARITIME DANGEROUS GOODS CODE
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1. | STATUS AND BACKGROUND

The International Maritime Organization (IMO) is the specialised United Nations agency with responsibility for international maritime affairs. Like all United Nations agencies, the IMO is made up of Member States who are obliged to become contracting parties to IMO's various international conventions. In addition to the Member States, there are a number of international organizations who are concerned with maritime issues and who have Non-Governmental Organization (NGO) status at IMO. ICHCA International Limited has such status at IMO.

1.1. IMO Dangerous Goods Conventions

There are three international conventions produced by IMO which are applicable to the transport of dangerous goods:

1.1.1. SOLAS

The International Convention for the Safety of Life at Sea, 1974 (1974 SOLAS Convention), as amended, Chapter VII of which deals with the safety aspects of the transport of dangerous goods by sea.

1.1.2. MARPOL

The International Convention for the Prevention of Pollution from Ships as modified by the Protocol of 1978 (MARPOL 73/78), Chapter III of which deals with prevention of pollution arising from the transport of dangerous goods by sea.

1.1.3. CSC Code

The 1972 Convention for Safe Containers provides uniform safety regulations for ensuring that containers are suitable and safe for transport.

1.2. The IMDG Code

All IMO Member States are required to implement national legislation to address the transport of dangerous goods, through their legal obligations under the SOLAS and MARPOL Conventions. However, to assist them, the IMO has produced a detailed set of requirements covering the transport of packaged dangerous goods by sea in a separate Code; the International Maritime Dangerous Goods (IMDG) Code. The requirements of the IMDG Code are based upon the Model Regulations (known as the 'Orange Book') produced by the United Nations Committee of Experts on the Transport of Dangerous Goods in Geneva, together with number of recommendations for good practice. The requirements of the IMDG Code are published in 2 volumes with an additional Supplement volume, which contains a number of individual IMO related publications.

1.2.1. Adoption

Most parts of the IMDG Code became mandatory on 1st January 2004, under the mandatory requirements of the SOLAS Convention. While most Member States have incorporated the requirements of the IMDG Code without further amendment into their national legislation,

others have applied some different (usually more stringent) national requirements in addition to those of the IMDG Code.

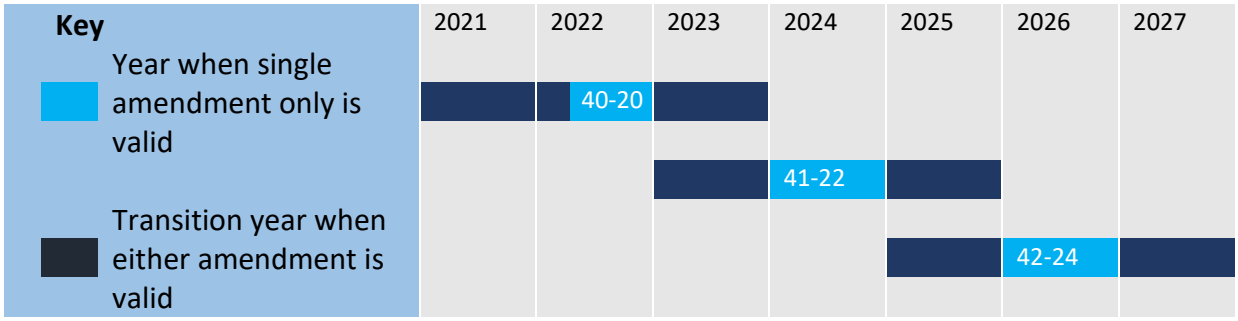
When shipping dangerous goods, it is important to be aware of any further restrictions or requirements, which may apply in a particular country, in addition to the IMDG Code.

1.2.2. Shoreside Training

Training requirements for shoreside personnel involved in packaged dangerous goods shipments are identified in chapter 1.3 of the IMDG Code.

1.2.3. Amendment Cycle

The IMDG Code is updated on a two-yearly basis with each amendment valid for up to three years. Amendments overlap each other so that there is always a transition period for industry to make the necessary adjustments to the latest amendment.



Amendment 41-22 was published on 1st January 2023 and entered into force on 1st January 2024.

Amendment work is undertaken by the Sub- Committee on Carriage of Cargoes and Containers (CCC) on an ongoing basis. In addition to incorporating amendments arising from the United Nations Committee of Experts in Geneva, the Sub-Committee also considers proposals for amendments prepared by IMO's Member States. All amendments must be approved by IMO's most senior technical committee, the Maritime Safety Committee (MSC) before they can be published in the next edition of the IMDG Code.

As a result of the two-yearly cycle of amendments, a completely new edition of the IMDG Code is published every two years. Following publication, an erratum may be issued with additional changes or to correct any printing errors which may have arisen.

It is extremely important to ensure that the details on any errata issued are incorporated into the IMDG Code and taken into account at the appropriate time.

2. | PRINCIPLES OF THE IMDG CODE

The IMDG Code is based on an internationally agreed system which:

1	Groups dangerous goods together based on the hazards they present in transport (classification)
2	Contains the dangerous goods in packagings/tanks which are of appropriate strength and which will prevent the goods escaping
3	Uses hazard warning labels, UN numbers and other identifying marks to identify dangerous goods in transport
4	Requires standard information to be provided when dangerous goods are being transported
5	Lays down principles for ensuring that incompatible dangerous goods are kept apart
6	Lays down principles for where to place dangerous goods on board ship to ensure safe transport
7	Provides emergency response advice for dangerous goods involved in a fire or spillage on board ship

3. | LAYOUT OF THE IMDG CODE

3.1. Format

The IMDG Code adopts a standard reference book format with an introduction, main contents, appendices and an index. Its layout has been harmonised with that of the United Nations Model Regulations (the Orange Book) which forms the basis of all international modal regulations covering the transport of dangerous goods (i.e. road, rail, inland waterway, air and sea).

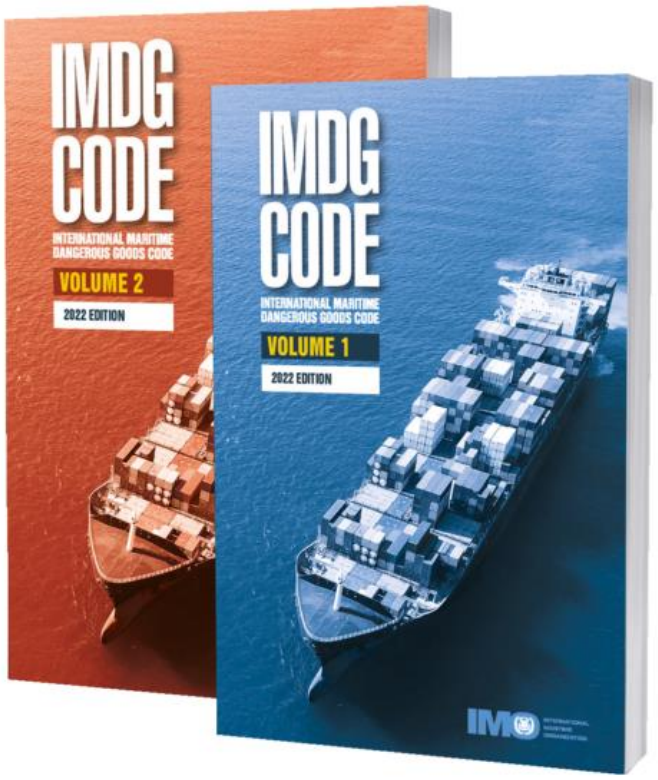
Consequently, the multimodal shipper should be able to find the same information in the same part of the international regulations, no matter what form of transport is being used.

3.2. Dangerous Goods List

The Dangerous Goods List (DGL) is the core of the IMDG Code. This contains a list of all the dangerous goods assigned under the United Nations system in numerical (UN Number) order (see 4.2 below), together with their specific transport requirements in a coded system.

3.3. Volumes

The Code is presented in two main books, Volume 1 and Volume 2 with a third Supplement volume containing related IMO publications and IMO resolutions. It is necessary to use the first two volumes to obtain the required information when shipping dangerous goods by sea.



3.3.1. Volume 1

Volume 1 contains Parts 1, 2, 4, 5, 6 and 7.

3.3.2. Volume 2

Volume 2 is comprised mainly of Part 3 which contains the DGL, a list of all the dangerous goods in UN Number order, together with their transport requirements in a coded system presented in 18 columns, of which columns 7 and 16 are divided into two parts (a and b).

The transport requirements contained in the DGL include:

- Classification information i.e. UN Number, Proper shipping Name, class etc.
- Special provisions applicable to certain substances and articles in the DGL
- Limited quantity and excepted quantity provisions
- Stowage and segregation requirements

- Packaging and tank requirements

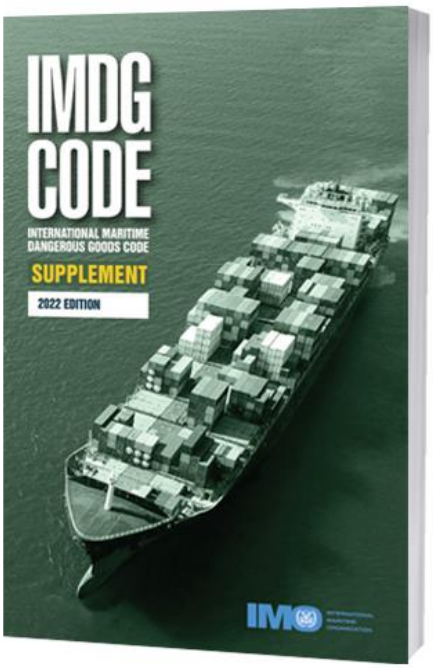
This volume also has two appendices and an alphabetical list of the substances, materials and articles listed in the DGL.

Details of the contents of each of the above parts are reproduced in the Appendix of this briefing pamphlet.

3.3.3. Supplement Volume

The Supplement volume comprises a number of separate IMO publications that relate to the IMDG Code, these include:

- Emergency Procedures (EmS) for use on ships in the event of an accident (e.g. spillage or fire).
- Medical First Aid Guide (MFAG) for use on ships in accidents involving dangerous goods.
- Reporting procedures, for use by ships to report incidents involving dangerous goods, harmful substances, and/or marine pollutants.
- Recommendations on the Safe Use of Pesticides in Ships (e.g. fumigation).
- Irradiated Nuclear Fuel (INF) Code.
- Various relevant IMO Resolutions, Circulars, etc...



4. | CLASSIFICATION

4.1. Purpose

The primary purpose of the IMDG Code's classification system is to:

- Identify goods which are considered to be dangerous for transport.
- Identify the dangers which are presented by dangerous goods in transport.
- Ensure that the correct measures are taken to enable these goods to be transported safely without risk to persons, other cargo, vessels or the environment (both within the port and at sea).

4.2. UN Numbers

UN Numbers are unique 4 figure, Arabic numeral numbers allocated by the UN Committee of Experts on the Transport of Dangerous Goods to specific or generic Proper Shipping Names (PSNs) in order to:

- Overcome language barriers (e.g. NITROUS OXIDE = HEMIOXIDE D'AZOTE = DISTICK STUFFOXIDE)
- Avoid confusion caused by similar names (e.g. SULPHURYL CHLORIDE, UN 1834 and SULPHURYL FLUORIDE, UN 2191)
- Avoid mispronouncing/misspelling complicated chemical names (e.g. ISOCYANATOBENZOTRIFLUORIDES = UN 2285)

UN Numbers starting with "0" are allocated to UN Class 1 Explosives while UN Numbers starting with "1", "2" or "3" are used to identify goods of any other class.

The UN Number for a substance or article must be quoted whenever there is a need for identification such as in an incident and must appear on containment systems and on documentation.

4.3. Proper Shipping Names

Each UN Number is allocated a Proper Shipping Name (PSN). The PSN is the accepted name which must be used for transport purposes on documentation, packagings, etc.

The PSN is that portion of the entry in the DGL which is shown in upper-case characters (plus any numbers, Greek letters, 'sec', 'tert', and the letters m, n, o, p, which form an integral part of the name).

4.4. Classes

In accordance with the principles set out in the UN Recommendations, the IMDG Code divides dangerous goods into 9 classes, some of which are further subdivided, as below.

Class	Type of Danger
1	**Explosives**
2	**Gases (sub-divided as follows)** Class 2.1 Flammable gases Class 2.2 Non-flammable, non-toxic gases Class 2.3 Toxic gases
3	**Flammable liquids**
4	**Flammable solids, substances liable to spontaneous combustion and substances which,in contact with water, emit flammable gases (sub-divided as follows)** Class 4.1 Flammable solids (also includes self-reactive substances, polymerizing substances and solid de-sensitized explosives) Class 4.2 Substances liable to spontaneous combustion Class 4.3 Substances which, in contact with water, emit flammable gases
5	**Oxidizing substances and organic peroxides (sub-divided as follows)** Class 5.1 Oxidizing substances Class 5.2 Organic peroxides
6	**Toxic and infectious substances (sub-divided as follows)** Class 6.1 Toxic substances Class 6.2 Infectious substances
7	**Radioactive material**
8	**Corrosives**
9	**Miscellaneous dangerous substances and articles (class 9) and environmentally hazardous substances**

4.5. Multiple Classification

Some dangerous goods may present hazards associated with more than one class. For example, some flammable liquids (Class 3) may also be toxic (Class 6.1) and some flammable liquids (Class 3) may also be both toxic (Class 6.1) and corrosive (Class 8). When classifying dangerous goods, the main hazard presented is considered to be the primary hazard and any other hazards (up to a maximum of 2) are considered to be subsidiary hazards.

Dangerous goods must always be labelled to show all the hazards (i.e. primary and subsidiary) that they present in transport (see 5.2 below).

4.6. N.O.S. and Generic Entries

Pure chemicals and dangerous goods transported in sufficient quantities are allocated individual United Nations (UN) Numbers.

However, as many of the chemicals produced today are mixtures, solutions, formulations, etc., containing a number of different hazardous constituents, they are shipped under an appropriate general "Not Otherwise Specified" (N.O.S.) entry, which describes the dangerous goods by their main hazards.

For example, any flammable liquid which does not have its own individual UN Number nor any subsidiary hazard is shipped under UN 1993 Flammable Liquid, N.O.S. Similarly, any corrosive solid, which is also toxic, is shipped under UN 2923 Corrosive Solid, Toxic, N.O.S. Generic entries for products based on their chemical properties may also be used (e.g. UN 3271 ETHERS N.O.S or UN 1987 ALCOHOLS N.O.S.).

Most classes contain a number of possible N.O.S. or generic entries which may be used and Appendix A of Volume 2 lists all the possible entries by class.

4.7. Organic Peroxides and Self-Reactive Substances

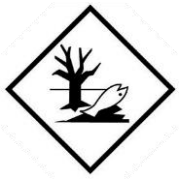
Organic Peroxides in Class 5.2 and Self-Reactive Substances in Class 4.1 are classified into seven types according to the degree of danger they present.

The types range from type A, which is not accepted for carriage in the packaging in which it is tested, to type G, which is not subject to the provisions of the IMDG Code.

The classification of types B to F is directly related to the maximum quantity allowed in one package. They are further sub-divided according to whether they are solid or liquid and whether they require temperature control during transport.

This results in specific UN Numbers being available to ship both Organic Peroxides and Self-Reactive Substances (e.g. UN 3101 for Organic Peroxide Type B, Liquid, UN 3235 for Self-reactive liquid, Type D, Temperature-Controlled, etc.).

4.8. Marine Pollutants



As a consequence of MARPOL 73/78 Annex III since 1st January 1991 items which are harmful to the marine environment (marine pollutants), but not to people or the ship (hitherto the only basis for inclusion in the Code) have been included in Class 9.

All marine pollutants, whether in Class 9 (because they do not fall under the classification criteria of Classes 1-8) or one of the other classes must, unless exempted, display the marine pollutant mark. The term 'marine pollutant' is referred to in other modal regulations as Environmentally Hazardous Substance (EHS) (see section 5 for package marking requirements).

4.9. Degree of hazard (Packing Group)

Dangerous goods in many classes have been sub- divided into three packing groups (PG) reflecting the degree of danger they present in transport.

- Packing Group (PG) I - represents great danger
- Packing Group (PG) II - represents medium danger

- Packing Group (PG) III - represents low danger.

When selecting a packaging to contain dangerous goods, the PG of the dangerous goods determines the type of packaging and the standards to which it is manufactured and tested. Packaging used to transport PG I dangerous goods must be manufactured and tested to a higher standard than packaging used to transport PG II or PG III dangerous goods. It also influences other transport requirements such as limited quantity values and stowage and segregation exemptions.

5. | MARKING, LABELLING AND PLACARDING

5.1. Marking, labelling and placarding

To ensure correct identification of dangerous goods in the transport chain they must be correctly marked, labelled and placarded to ensure that the hazards are communicated to all.

5.2. Package Marking

Packaging should normally be marked with the UN Number and PSN. There are also additional marks (shown below) that may be required and these include:

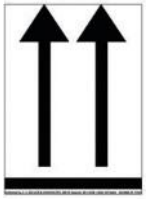
- Marine Pollutant mark
- Limited quantity mark
- Excepted quantity mark
- Lithium battery mark
- Orientation arrows

Marine pollutant

Limited Quantity

Excepted Quantity

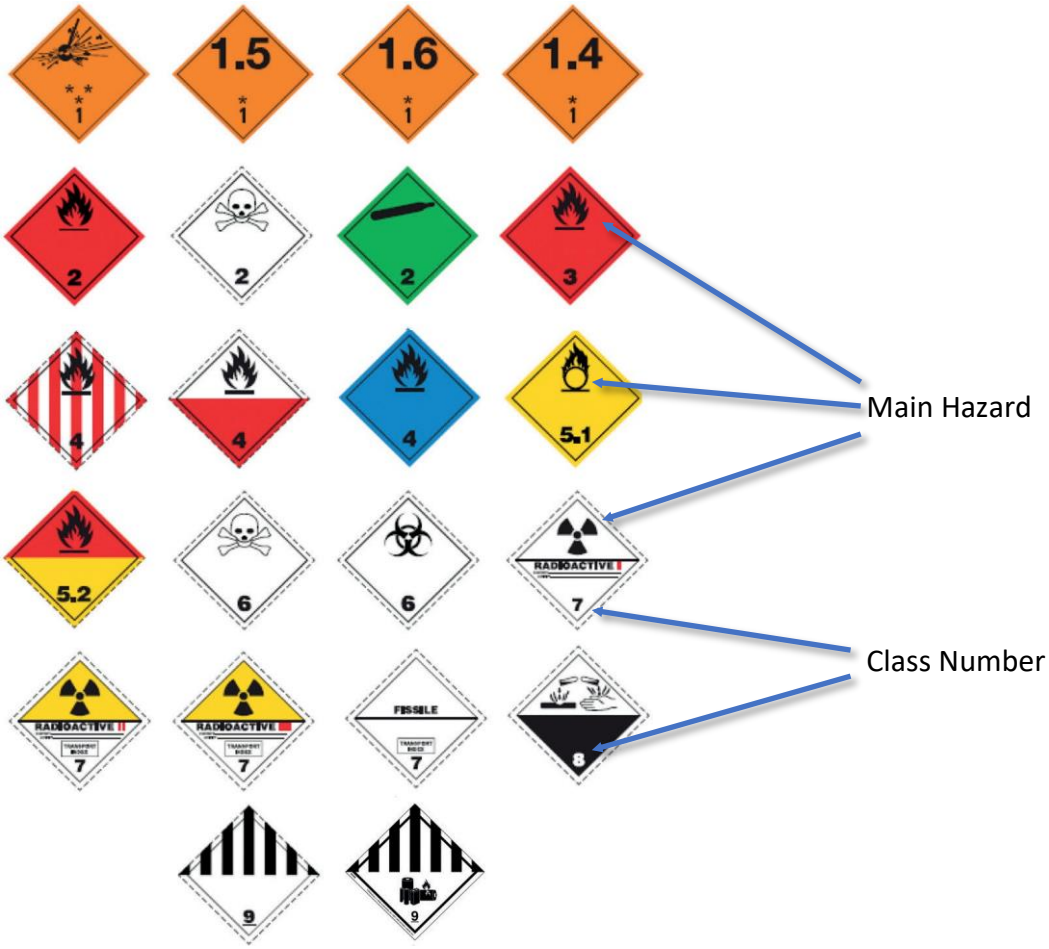
Lithium battery



Orientation arrows

5.3. Package Labels

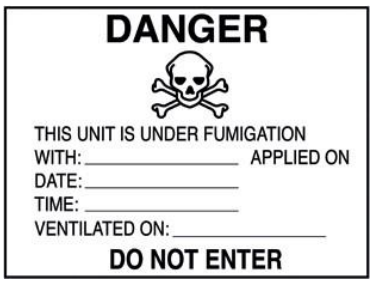
Each class is assigned a specific diamond shaped label or labels indicating the main hazard pictorially and showing the class number in the bottom corner (see below). Each package containing dangerous goods must bear the appropriate label(s) to warn of all the hazards (both primary and any subsidiary hazards) presented by the dangerous goods.

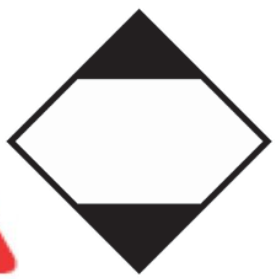


5.4. Placarding and Marking of Cargo Transport Units (CTUs)

Freight containers, vehicles, etc., containing such packages must bear enlarged labels, known as placards.

In addition to the class placards, there are also additional marks and signs, which must be shown on the exterior of vehicles and cargo transport units in certain circumstances. These include the Fumigation Warning Mark to be displayed on units carrying dangerous goods under fumigation and the Elevated Temperature Mark to be displayed on tanks carrying dangerous goods which are carried hot, the Limited Quantity Mark, for goods declared as Limited Quantities and the Marine Pollutant (Environmentally Hazardous Substance) Mark.





6. | PRODUCT CONTAINMENT

6.1. Categories

Product containment is dealt with in six distinct categories, as follows:

6.1.1. Conventional packagings

Conventional packagings (e.g. drums, bags, fibreboard boxes) meet the following criteria:

- have a capacity up to 450 litres/400 kg
- are required to meet certain standards
- must pass specified performance tests
- bear UN package approval marks as evidence of this

The IMDG Code indicates a range of possible packages for every substance, however these are, of course, subject to the prime requirement that the packaging materials must be compatible with the proposed contents and suitable for use.

Conventional packagings permitted to be used for all dangerous goods are coded into packing instructions (P codes) which are given in column 8 of the DGL. Any special packing provisions which apply are coded (PP codes) in column 9 of the DGL. Details of these packaging instructions and special packing provisions are found in Chapter 4.1 Paragraph 4.1.4.1 of Volume I of the IMDG Code. Details of testing and examples of UN packaging codes are given in Chapter 6.1 of Volume 1 of the IMDG Code.

6.1.2. Intermediate Bulk Containers (IBCs)

Intermediate Bulk Containers are large rigid or flexible packagings of a capacity up to 3,000 litres and are designed for mechanical handling. Six categories of IBC are specified, together with performance tests and details of which substances are allowed in which types of IBC.

If IBCs are permitted to be used for dangerous goods, they are coded into IBC packing instructions (IBC codes) which are given in column 10 of the DGL. Any special IBC packing provisions which apply are coded (B codes) in column 11 of the DGL.

Full details of the packaging instructions for IBCs and special packing provisions are found in Chapter 4.1.4.2 of Volume I of the IMDG Code. Details of testing and examples of IBC packaging codes are given in Chapter 6.5 of Volume 1 of the IMDG Code.

6.1.3. Large Packagings

Large Packagings consist of:

- an outer packaging having a capacity exceeding 400 kg net mass or 450 litres capacity up to a volume of not more than $3m^3$
- containing either inner packagings or articles.

Large Packagings are designed to be handled by mechanical means.

If Large Packagings are permitted to be used for all dangerous goods they are coded into large packing instructions (LP codes) which are given in column 8 of the DGL. Any special packing provisions for Large Packagings which apply are coded (LP codes) in column 9 of the DGL.

Full details of the Large Packagings instructions and Special Packing provisions are found in Chapter 4.1.4.3 of Volume I of the IMDG Code.

Details of testing and examples of Large Packaging codes are given in Chapter 6.6 of Volume 1 of the IMDG Code.

6.1.4. Bulk Containers

Certain solid dangerous goods may be transported in bulk when indicated in the DGL by a "BK" code in column 13 of the DGL. Details on their use is covered in chapter 4.3. There are three permitted types of bulk container for the carriage of solid dangerous goods identified:

- **BK1: Sheeted bulk container**

  these may only be used for sea transport for UN 3077 not considered to be marine pollutants (see example shown right)

- **BK2: Closed bulk container**

  these include freight containers, offshore bulk containers, bulk bins, swap bodies, trough-shaped containers, roller containers and the load compartment of vehicles

- **BK3: Flexible bulk container**

  these are not permitted in cargo transport units but may only be transported in ship's holds

6.1.5. Portable tanks and road tank vehicles

Portable tanks and road tank vehicles range in size from 450 litres upwards, and different types, required to accommodate the different requirements of various liquids and gases, are detailed in the Code. Items such as maximum allowable working pressure, relief valves, filling ratios etc., are all dealt with, together with specific requirements for individual substances (Volume 1, Chapters 4.2, 6.7 and 6.8 also in the DGL).

Note, in Amendment 41-22, there is a new chapter 6.10 for the provisions for the design, construction, inspection and testing of portable tanks with shells made of fibre-reinforced plastics (FRP) materials. It applies to portable tanks with an FRP shell intended for the carriage of classes 1, 3, 5.1, 6.1, 6.2, 8 and 9.

Multiple-Element Gas Containers (MEGC) are built to similar standards as portable tanks and are used for the transport of non-refrigerated gases (see Chapter 4.2 and 6.7 of the Code).

Portable tank

Multiple-Element Gas Container (MEGC)

7. | DOCUMENTATION

The IMDG Code requires that anyone who offers dangerous goods for transport must provide a dangerous goods transport document to communicate details of the dangerous goods being shipped. This document must include:

7.1. Dangerous Goods Description

- UN Number
- Proper Shipping Name (PSN)
- Class/division (including compatibility group letter for class 1)
- Subsidiary Hazard
- Packing Group

The sequence in which this information appears is vitally important and is laid down in the IMDG Code.

7.2. Information required in addition to the dangerous goods description

- Number and kind of packages (there is no requirement to mention inner packages)
- Total quantity of dangerous goods

7.3. Additional information required only if applicable

- Technical name for goods allocated SP 274 or 318 in column 6 of the DGL
- The term “waste”, “salvage packaging” or “hot“ as required
- Flash point
- Marine pollutant
- Limited Quantity
- Excepted Quantity

Note, there may also be specific additional information required for certain classes of dangerous goods so the provisions of chapter 5.4 of the IMDG Code should always be consulted when preparing the transport document.

7.4. Declarations and signatures

- Dangerous goods declaration (duly signed by or on behalf of the shipper) certifying that all the Code requirements have been complied with
- Container packing certificate/vehicle declaration certifying that permitted dangerous goods have been properly packed and secured in a suitable container/vehicle (Note, not required for portable tanks)
- The document may be signed mechanically or manually, but must be legible

7.5. Retention of documentation

The Carrier and the Consignor should retain a copy of the transport documentation for a minimum of three months.

8. | STOWAGE AND SEGREGATION

These are important considerations when both loading dangerous goods into CTUs and loading CTUs containing dangerous goods on board vessels.

8.1. Stowage

Stowage refers to where (on deck or under deck) and on what sort of ship (cargo or passenger) different dangerous goods may be stowed.

For Classes 2 - 9 there are 5 stowage categories (A to E) and the stowage category indicating the applicable requirements for each UN Number appear in column 16a of the DGL and are defined in Chapter 7.1, Paragraph 7.1.3.2. For Class 1 there are also 5 stowage categories (01 to 05) defined in Paragraph 7.1.3.1.

In addition, for individual substances there are also thirty “SW” (stowage) codes and five “H” (handling) codes which add further requirements. These codes are defined in paragraphs 7.1.5 and 7.1.6 of the IMDG Code respectively.

For LQ and EQ, the stowage category is always A and any “SW” or “H” codes do not apply.

8.2. Segregation

Dangerous goods, which may interact dangerously with each other, need to be segregated (i.e. separated) from each other.

In the IMDG Code general segregation provisions are covered in chapter 7.2 with the following chapters covering segregation provisions within CTUs and segregation requirements between CTUs on board different vessel types.

General requirements to segregate various classes of dangerous goods are provided in table 7.2.4, whereas substance specific segregation requirements are identified via “SG” codes in 16b of the DGL and further explained in chapter 7.2, paragraph 7.2.8. The segregation provisions provided by these codes take precedence over table 7.2.4.general requirements.

To further aid segregation there are also “SGG” codes provided in column 16b. These group together dangerous goods with similar chemical properties. There are 18 segregation groups e.g. SGG1 - Acids, SGG2 - Ammonium compounds, SGG13 - Perchlorates, SGG17 - Azides. They are all listed in 3.1.4.4 and 7.2.5.2.

For LQ and EQ there are exemptions from these segregation requirements provided they do not react dangerously with each other.

8.3. Segregation requirements on board vessels

The IMDG Code also has ship specific stowage and segregation provisions included in part 7. These further requirements are dealt with in separate chapters namely:

- Container Ships; Chapter 7.4
- Ro-Ro Ships; Chapter 7.5
- General Cargo Ships; Chapter 7.6
- Shipborne barges on barge carrying ships; Chapter 7.7

9. | LIMITED QUANTITIES AND EXCEPTED QUANTITIES

The IMDG Code offers relaxations from a number of its provisions when dangerous goods are shipped by sea in such small packages that there is no great likelihood of them creating a serious incident during carriage.

These relaxations apply to dangerous goods packed and shipped in either Limited Quantities (LQ) or Excepted Quantities (EQ).

The requirements for both offer concessions from some of the IMDG Code's standard packing, stowage, segregation and marking and labelling requirements.

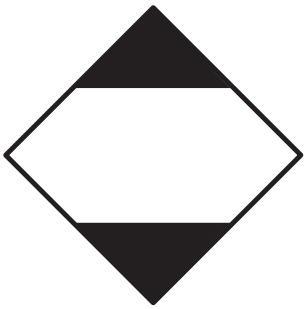
The LQ and EQ provisions are not available for all dangerous goods and permitted substances must be shipped in individual packages meeting specified quantity limitations.

If LQ or EQ provisions can be applied, this is indicated in the DGL in column 7a and column 7b respectively.

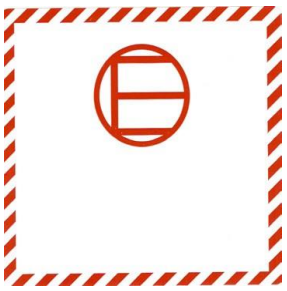
Packages containing dangerous goods packed under LQ provisions do not need to be marked with the UN Number or PSN of the contents or be labelled or display the marine pollutant mark but they must display the LQ mark.

CTUs containing LQ packages only (and no other dangerous goods) must not display class placards but they must display an enlarged version of the LQ mark in the same locations specified for placards.

There is also a specific mark for EQ which must be applied to packages. Note, this mark is not to be applied on a CTU carrying dangerous goods in EQ.



Limited Quantity



Excepted Quantity

10. | COMPETENT AUTHORITIES

Competent Authorities are responsible for certain issues in relation to the maritime transport of dangerous goods, such as for granting approvals and exemptions, wherever this is authorised in the Code.

Where the Competent Authority of one Member State has granted an approval or an exemption, this must be recognised by the Competent Authorities of all the relevant Member States through which the dangerous goods are travelling.

A list of Competent Authority addresses is included in the Code, and is regularly updated as additional information becomes available to IMO (volume 1, chapter 7.9).

APPENDIX - THE IMDG CODE LIST OF CONTENTS

2024 EDITION INCORPORATING AMENDMENT 41-22

Part 6	**Construction and Testing of Packagings, Intermediate bulk containers (IBCs), large packagings, portable tanks, multiple-element gas containers (MEGCs) and road tank vehicles**
Chapter 6.1	Provisions for the construction and testing of packagings
Chapter 6.2	Provisions for the construction and testing of pressure receptacles, aerosol dispensers,small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied flammable gas
Chapter 6.3	Provisions for the construction and testing of packagings for Class 6.2 infectious substances of Category A
Chapter 6.4	Provisions for the construction, testing and approval of packages for radioactive material and for the approval of such material
Chapter 6.5	Provisions for the construction and testing of intermediate bulk containers (IBCs)
Chapter 6.6	Provisions for the construction and testing of large packagings
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